

YAMAP0347USDSerial No. 09/760,950CLAIMS

1. (Currently amended) A lamination ceramic chip inductor, formed by the process comprising the steps of:

interposing a conductive pattern between a pair of magnetic insulation layers so as to be in contact with the pair of magnetic insulation layers and so that the magnetic insulation layers contact one another in areas not in contact with the conductive pattern; and

forming a conductive coil,

wherein the interposing step includes electroforming at least one conductive pattern, and the conductive pattern has a thickness of 10 μm or more and a width to thickness ratio from 1 to less than 5,

the conductive pattern is continuous on one surface of at least one of the magnetic insulation layers, and

the conductive pattern is substantially free of discontinuities.

2. (Original) A lamination ceramic chip inductor according to claim 1, wherein the step of interposing at least one conductive pattern includes interposing a plurality of conductive patterns, and wherein the step further comprises printing a thick film conductor to electrically connect at least two of the conductive patterns to each other.

3. (Original) A lamination ceramic chip inductor according to claim 2, wherein the interposing step includes interposing an electroformed conductive pattern having a shape of a straight line.

4. (Canceled)

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5. (Currently amended) A lamination ceramic chip inductor according to claim 1, formed by the process comprising the steps of:

interposing a conductive pattern between a pair of magnetic insulation layers so as to be in contact with the pair of magnetic insulation layers and so that the magnetic insulation layers contact one another in areas not in contact with the conductive pattern; and

forming a conductive coil,

wherein the interposing step includes electroforming at least one conductive pattern, the conductive pattern has a thickness of 10 μm or more and a width to thickness ratio from 1 to less than 5, and

wherein the interposing step includes interposing at least one conductive pattern between insulation layers formed of a material containing one of a non-shrinkage powder which does not shrink from sintering and a low ratio shrinkage powder which shrinks slightly from sintering.

6. (Currently amended) A lamination ceramic chip inductor according to claim 1, formed by the process comprising the steps of:

interposing a conductive pattern between a pair of magnetic insulation layers so as to be in contact with the pair of magnetic insulation layers and so that the magnetic insulation layers contact one another in areas not in contact with the conductive pattern; and

forming a conductive coil,

wherein the interposing step includes electroforming at least one conductive pattern, and the conductive pattern has a thickness of 10 μm or more and a width to thickness ratio from 1 to less than 5, and

wherein the interposing step includes interposing the at least one conductive pattern between insulation layers formed of a magnetic material containing an organolead

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compound as an additive for restricting deterioration of magnetic characteristics of the insulating layers.

7. (Original) A lamination ceramic chip inductor according to claim 1, wherein the interposing step includes electroforming the conductive pattern of a silver plating liquid containing no cyanide.

8-27. (Canceled)

28. (Currently amended) A lamination ceramic chip inductor, formed by the process comprising the steps of:

interposing a conductive pattern between a pair of magnetic insulation layers so as to be in contact with at least one of the pair of magnetic insulation layers; and

forming a conductive coil,

wherein the interposing step includes electroforming at least one conductive pattern, and the conductive pattern has a thickness of 10 μ m or more and a width to thickness ratio of from 1 to less than 5.

the conductive pattern is continuous on one surface of at least one of the magnetic insulation layers, and

the conductive pattern is substantially free of discontinuities.

29. (Previously presented) A lamination ceramic chip inductor according to claim 28, wherein the step of interposing at least one conductive pattern includes interposing a plurality of conductive patterns, and wherein the step further comprises printing a thick film conductor to electrically connect at least two of the conductive patterns to each other.

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30. (Previously presented) A lamination ceramic chip inductor according to claim 29, wherein the interposing step includes interposing an electroformed conductive pattern having a shape of a straight line.

31. (Currently amended) A lamination ceramic chip inductor according to claim 28, formed by the process comprising the steps of:

interposing a conductive pattern between a pair of magnetic insulation layers so as to be in contact with at least one of the pair of magnetic insulation layers; and forming a conductive coil,

wherein the interposing step includes electroforming at least one conductive pattern, and the conductive pattern has a thickness of 10 μm or more and a width to thickness ratio of from 1 to less than 5, and

wherein the interposing step includes interposing at least one conductive pattern between insulation layers formed of a material containing one of a non-shrinkage powder which does not shrink from sintering and a low ratio shrinkage powder which shrinks slightly from sintering.

32. (Currently amended) A lamination ceramic chip inductor according to claim 28, formed by the process comprising the steps of:

interposing a conductive pattern between a pair of magnetic insulation layers so as to be in contact with at least one of the pair of magnetic insulation layers; and forming a conductive coil,

wherein the interposing step includes electroforming at least one conductive pattern, and the conductive pattern has a thickness of 10 μm or more and a width to thickness ratio of from 1 to less than 5, and

wherein the interposing step includes interposing the at least one conductive pattern between insulation layers formed of a magnetic material containing an organolead

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compound as an additive for restricting deterioration of magnetic characteristics of the insulating layers.

33. (Previously presented) A lamination ceramic chip inductor according to claim 28, wherein the interposing step includes electroforming the conductive pattern using a silver plating liquid containing no cyanide.

34-39. (Canceled)

40. (New) A lamination ceramic chip inductor according to claim 5, wherein the step of interposing at least one conductive pattern includes interposing a plurality of conductive patterns, and wherein the step further comprises printing a thick film conductor to electrically connect at least two of the conductive patterns to each other.

41. (New) A lamination ceramic chip inductor according to claim 6, wherein the step of interposing at least one conductive pattern includes interposing a plurality of conductive patterns, and wherein the step further comprises printing a thick film conductor to electrically connect at least two of the conductive patterns to each other.

42. (New) A lamination ceramic chip inductor according to claim 31, wherein the step of interposing at least one conductive pattern includes interposing a plurality of conductive patterns, and wherein the step further comprises printing a thick film conductor to electrically connect at least two of the conductive patterns to each other.

43. (New) A lamination ceramic chip inductor according to claim 32, wherein the step of interposing at least one conductive pattern includes interposing a plurality of conductive patterns, and wherein the step further comprises printing a thick film conductor to electrically connect at least two of the conductive patterns to each other.

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44. (New) A lamination ceramic chip inductor according to claim 5, wherein the interposing step includes electroforming the conductive pattern of a silver plating liquid containing no cyanide.

45. (New) A lamination ceramic chip inductor according to claim 6, wherein the interposing step includes electroforming the conductive pattern of a silver plating liquid containing no cyanide.

46. (New) A lamination ceramic chip inductor according to claim 31, wherein the interposing step includes electroforming the conductive pattern of a silver plating liquid containing no cyanide.

47. (New) A lamination ceramic chip inductor according to claim 32, wherein the interposing step includes electroforming the conductive pattern of a silver plating liquid containing no cyanide.